

REMARKS

Claims 1-118 were pending and presented for examination and in this application. In an Office Action dated August 21, 2006, claims 1-118 were rejected. Applicants thank Examiner for examination of the claims pending in this application and addresses Examiner's comments below.

Applicants are amending claims 1 and 56-81 in this Amendment and Response. In making these amendments, Applicants do not concede that the subject matter of such claims was in fact disclosed or taught by the cited art. Rather, Applicants reserve the right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

In view of the Amendments herein and the Remarks that follow, Applicants respectfully request that Examiner reconsider all outstanding rejections, and withdraw them.

Response to Rejections under 35 U.S.C. 103

In the 21st paragraph of the Office Action, claims 81-84, 98-99, and 118 have been rejected under U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,721,883 to Katsuo ("Katsuo") in view of U.S. Patent No. 6,476,793 B1 to Motoyama ("Motoyama"). This rejection is now traversed.

Claim 81, as amended, recites a method for printing time-based media, the method comprising:

- receiving time-based media data from a media source;
- receiving user input, the user input specifying a multimedia function to perform on the time-based media and a distribution of processing power between a printer and a processing device to carry out the specified multimedia function;

determining a first portion of the processing to be allocated to the printer and a second portion of the processing to be allocated to the processing device satisfying the distribution of processing power specified by the user input;

allocating the determined processing portions to the printer and the processing device based on the distribution of processing power specified by the user input;

performing, by the printer, the allocated first portion of processing to carry out the specified multimedia function;

performing, by the processing device, the allocated second portion of processing to carry out the specified multimedia function;

producing output on the printer associated with the processed media data; and

producing an electronic output associated with the processed media data.

The claimed invention performs, by a printer and a processing device, processing on time-based media to carry out a specified multimedia function. A user input is received that specifies the multimedia function and a distribution of processing power between the printer and the processing device. Based on the specified distribution, the claim invention determines a first portion of processing to be allocated to printer and a second portion of processing to be allocated to the processing device that satisfies the specified processing power distribution. One benefit of the claimed invention is that the method can, for example, determine an allocation of processing to carry out a multimedia function that satisfies any arbitrary distribution of processing power specified by the user. (See, for example FIG. 9 of the specification).

The claimed invention would not have been obvious to one of ordinary skill at the time of the invention because the cited references fail to disclose or suggest every limitation of the claim. Specifically, the combination of Katsuo and Motoyama fails to disclose or suggest:

...determining a first portion of the processing to be allocated to the printer and a second portion of the processing to be allocated to the processing device satisfying the distribution of processing power specified by the user input...

Katsuo discloses a parallel processing system for parallel image processing. Multiple processors operate on different areas of an image to produce multiple partial image processing results and the partial results are integrated to form a final result. (Katsuo, Abstract). Motoyama discloses a video processing method and apparatus for color conversion and color adjustment. Motoyama addresses a problem in the prior art in which video color correction causes loss of gradation, and additionally provides an improved way of specifying a particular area to be subjected to color adjustment. (Motoyama col. 1, lines 30-43).

As Examiner admits, Katsuo does not disclose that the first and second amount of processing is specified by a user input. Instead Examiner points to the user interface of Motoyama which allows a user to specify parameters for various settings (but not specifically processing amounts). The Examiner recites that the claimed feature would be obvious because “it would be easier and more convenient to be able to simply input what the first and second processing amounts are, rather than waiting for the parallel processing system to perform a set of configuration determinations.”

However, even if Katsuo and Motoyama could be combined, the combination still does not provide at least the step of **allocating processing portions to satisfy the distribution of processing power specified by the user input**. Although Katsuo can divide a processing function between multiple processors, the function is divided by assigning each processor to operate on specific equal-sized areas of the image (see, for

example, FIGs. 5-6 of Katsuo). However, the size of an area does not necessarily correspond to the amount of processing power required to apply a multimedia function to that area. Rather, one area may require significantly more processing power than another equal sized area depending on, for example, various image characteristics independent of image size. Thus, even if a user could manually provide the input that specifies which areas to allocate to each processor in Katsuo, the allocation would still not be able to satisfy **a distribution of processing power** specified by the user. Rather, in order for Katsuo to distribute processing to meet an arbitrary distribution of processing power specified by a user (e.g., 80% by the printer and 20% by the processor), Katsuo would require an architecture that is fundamentally different from the architectures disclosed by Katsuo or Motoyama. Therefore, the claimed invention is not obvious in view of Katsuo and Motoyama.

For at least the reasons above, claim 81, as amended, and its dependent claims are patentably distinguishable over Katsuo and Motoyama. Therefore, Applicants respectfully request that Examiner reconsider the rejection and withdraw it.

In the 3rd paragraph of the Office Action, claims 1-6, 20-21, 40, 45 and 55 have been rejected under U.S.C. 103(a) as allegedly being unpatentable over Katsuo, Motoyama, and “Performance Analysis of Median Filtering on MeikoTM – A Distributed Multiprocessor System”, by K.M. Poon and N.H.C. Yung (“Poon”). This rejection is traversed.

Claim 1 recites a system for printing time-based media data including elements similar to those discussed above. The claimed invention is not obvious in view of

Katsuo, Motoyama, and Poon for at least the reason that none of the references disclose or suggest:

...a printer, communicatively coupled to the user interface, the printer adapted to perform **a first amount of processing satisfying the distribution of processing power indicated by the received user input**, and to output an instruction to perform a **second amount of processing satisfying the distribution of processing power indicated by the received user input...**

Katsuo and Motoyama are discussed above. Poon discloses a multiprocessing filtering system with a master-slave configuration. A master processor reads and writes image data and dispatches sub-images to the slave processors. (Poon p. 635 lines 1-10). Poon also does not disclose or suggest **a first and second amount of processing satisfying the distribution of processing power indicated by the received user input**. Like Katsuo, Poon divides processing tasks evenly between multiple processors by dividing an image into multiple areas (Poon, Eq. 6). As noted above, the area of a portion of an image does not necessarily correspond to the amount of processing power required to apply the multimedia function to that area. Thus, Poon also only distributes processing according to specified areas of an image, and does not distribute processing according to a user-specified distribution of processing power. Even if the user, rather than the computer, could specify the area of the image to distribute to each processor, the allocation still would not satisfy **a user-specified distribution of processing power**. Therefore, claim 1, as amended, would not be obvious in view of Katsuo, Motoyama and Poon, either alone or in combination. Claims 2-6, 20-21, 40, 45, and 55 depend from claim 1. Therefore, the rejections to these claims should also be withdrawn for at least the same reasons as above.

In the 5th-33rd paragraphs of the Office Action, the remaining dependent claims have further been rejected under U.S.C. 103(a) as allegedly being unpatentable over Katsuo and Motoyama in various combinations with Poon; U.S. Patent No. 6,118,888 to Chino; U.S. Patent No. 5,091,948 to Kametani; U.S. Patent Application Publication No. 2002/0101513 A1 to Halverson; U.S. Patent No. 6,661,622 B1 to Krum; U.S. patent No. 6,594,377 B1 to Kim; U.S. Patent No. 5,568,406 to Gerber; U.S. Patent Application Publication No. 2003/0220988 A1 to Hymel; U.S. Patent Application Publication no. 2002/0010641 A1 to Stevens; U.S. Patent No. 6,296,693 B1 to McCarthy; U.S. Patent No. 5,115,967 to Wedekind; U.S. Patent Application Publication No. 2001/0003846 A1 to Rowe; and U.S. Patent No. 6,373,498 B1 to Abgrall.

The additional cited references all fail to disclose or suggest the limitations absent from Katsuo and Motoyama discussed above. Therefore, the claims, as amended, are patentable over each of the referenced cited above, taken alone or in combination.

It is also noted that dependent claims 85-118 recite various embodiments of the multimedia function that is applied to the time-based media such as, for example, face recognition, sound localization, motion analysis, etc. Applicants submit that each dependent claim includes additional patentable features for at least the reason that that the references do not provide any disclosure or suggestion of allocating processing that satisfies a user-specified distribution of processing power to carry out any of these multimedia functions. For example, although Katsuo discloses a process for evenly dividing an image into areas that can be separately processed, a process of allocating, for example, face recognition, sound localization, or motion analysis functions to separate processors based on a user-specified distribution of processing power would require an

entirely different processing architecture than that disclosed by Katsuo. Therefore, Applicants respectfully request that the Examiner reconsider the rejections to the remaining dependent claims and withdraw them.

CONCLUSION

The Examiner is asked to issue a Notice of Allowance for all pending claims. If any matters remain outstanding prior to allowance of the claims, the Examiner is invited to contact the undersigned representative.

Respectfully submitted,
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